

Reply to Office Action dated April 1, 2009

REMARKS

Claims 1-6, 11-16, 18-23, 26-29 and 32-35 are pending in the application. By this Amendment, claims 1, 11, 18, 20, 22 and 32 are amended and claims 17 and 36-38 are canceled without prejudice or disclaimer. Various amendments are made for clarity and are unrelated to issues of patentability.

The Office Action objects to claims 17-21 under 37 C.F.R. §1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. By this Amendment, dependent claim 17 is canceled. Dependent claims 18-21 further limit the previous subject matter.

The Office Action rejects claims 1-6, 11-23, 26-29 and 32-38 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Amended independent claims 1, 11 and 22 do not include the claim language “window size downward setting information if a receiving buffer is an overflow and a downward window size is 1” or the claim language “window size upward setting information if a receiving buffer is not in an overflow and an upward setting level is up to an upper level.” Dependent claims 36-38 have been canceled. The specification provides an adequate written description of the currently pending claims. Withdrawal of the rejection is respectfully requested.

The Office Action rejects claims 1-6, 11-23, 26-29 and 32-38 under 35 U.S.C. §103(a) over ETSI TS 125 322 version 5.1.0 (2002-06) (hereafter ETSI) in view of U.S. Patent No. 6,744,730 to Le et al. (hereafter Le). The rejection is respectfully traversed with respect to the pending claims.

Independent claim 1 recites receiving data units having serial numbers lying in a range of a receiving window, wherein the data units corresponding to an initial window size, setting window size control information based on a state of a receiving buffer that corresponds to the receiving window, transmitting the set window size control information from a receiver to a transmitter, and varying a transmitting window size of the transmitter according to the transmitted window size control information. Independent claim 1 also recites that setting the window size control information comprises: checking whether data units more than a predetermined value remain in the receiving buffer, when data units more than the predetermined value do not remain in the receiving buffer, setting a window size downward setting information as the window size control information, and receiving data units corresponding to the downward set window size according to the window size downward setting information. Independent claim 1 also recites checking whether a predetermined margin for receiving the data units exist in the receiving buffer, when the predetermined margin does not exist in the receiving buffer, setting a window size maintaining information as the window size control information, and when the predetermined margin exists in the receiving buffer, setting a window size upward setting information as the window size control information.

In at least one non-limiting example, the present specification relates to window size maintaining information being based on a state of a receiving buffer that corresponds to the receiving buffer. See FIG. 6, operation S180 and page 16, lines 15-18 (or paragraph [0084] of the published application). See also operations S110, S120, S130, S140 and S140 of FIG. 6.

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The applied references do not teach or suggest all the features of independent claim 1. More specifically, ETSI and Le does not teach or suggest that window size control information includes window size maintaining information based on a state of a receiving buffer that corresponds to the receiving window.

The Office Action (on page 14) cites ETSI's page 33, section 9.2.2.11.3 (i.e., The Window Size Super-field) as teaching window maintaining information. This does not suggest window maintaining information is based on a state of a receiving buffer that corresponds to the receiving window. ETSI and Le do not teach or suggest setting window size control information based on a state of a receiving buffer that corresponds to the receiving window in combination with when the predetermined margin does not exist in the receiving buffer, setting a window size maintaining information as the window size control information, as recited in independent claim 1.

ETSI and Le also do not teach or suggest setting window size control information based on a state of a receiving buffer that corresponds to the receiving buffer in combination with when data units more than the predetermined value do not remain in the receiving buffer, setting a window size downward setting information as the window size control information, and when the predetermined margin does not exist in the receiving buffer, setting a window size maintaining information as the window size control information, and when the predetermined margin exists in the receiving buffer, setting a window size upward setting information as the window size control information, as recited in independent claim 1. Thus, independent claim 1 defines patentable subject matter.

Independent claim 11 recites that window size update information is transmitted from a receiving entity to a transmitting entity based on a processing speed by the receiving entity of data units stored in a receiving buffer, wherein acknowledgment information is transmitted simultaneously with the window size update information, the acknowledgment information controlling transmission of additional data units from the transmitting entity to the receiving entity, transmission of the additional data units controlled based on the window size update information. Independent claim 11 also recites that the window size control information is set to one of window size upward setting information, window size maintaining information and window size downward setting information based on a state of a receiving buffer that corresponds to the receiving window.

For at least similar reasons as set forth above, ETSI and Le do not teach or suggest at least these features of independent claim 11. More specifically, ETSI and Le do not teach or suggest that the window size control information is set to one of window size upward setting information, window size maintaining information and window size downward setting information based on a state of a receiving buffer that corresponds to the receiving window. Thus, independent claim 11 defines patentable subject matter.

Independent claim 22 recites receiving one or more protocol data units (PDUs) from a transmitting radio link control (RLC) entity, checking a state of a receiving buffer for storing the one or more PDUs, and transmitting window size control information to the transmitting RLC according to a state of the receiving buffer, the window size control information to vary a transmitting window size of the transmitting RLC entity for transmitting additional PDUs to be

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stored in the receiving buffer.³ Independent claim 22 also recites that acknowledgment information is transmitted simultaneously with the window size control information, the acknowledgment information controlling transmission of said additional PDUs based on the varied transmitting window size. Still further, independent claim 22 recites that the window size control information is set to one of window size upward setting information, window size maintaining information and window size downward setting information based on a state of a receiving buffer that corresponds to the receiving window.

For at least similar reasons as set forth above, ETSI and Le do not teach or suggest all the features of independent claim 22. More specifically, ETSI and Le do not teach or suggest that the window size control information is set to one of window size upward setting information, window size maintaining information and window size downward setting information based on a state of a receiving buffer that corresponds to the receiving window. Thus, independent claim 22 defines patentable subject matter.

For at least the reasons set forth above, each of independent claims 1, 11 and 22 defines patentable subject matter. Each of the dependent claims depends from one of the independent claims and therefore defines patentable subject matter at least for this reason. In addition, the dependent claims recite features that further and independently distinguish over the applied references.

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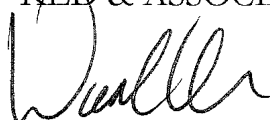
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CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-6, 11-23, 26-29 and 32-38 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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